Statement of Work and QA Requirements for Analysis of Methylene Blue Active Substances (MBAS) in Water Samples.

Synopsis: Water samples shall be provided to the TestAmerica in Savannah, Georgia for analysis of methylene blue active substances in ground-water samples collected from a site located in Wyoming. TestAmerica will analyze the samples using EPA Method 425.1 following their standard operating procedure SOP SA-GE-160v5. These data will be used to evaluate water quality of ground water collected from monitoring wells and domestic wells. A methylene blue active substances assay, or MBAS assay, is a colorimetric analysis test method that uses methylene blue to detect the presence of anionic surfactants (such as a detergent or foaming agent) in a sample of water. An anionic surfactant detected by the color reaction is called a methylene blue active substance (MBAS). These substances include carboxylates, phosphates, sulfates, and sulfonates. An MBAS assay alone does not, however, identify specific surfactants. This service will support research for the project "Ground-water Investigation in Pavillion, Wyoming", which is being conducted with Category 1 QA requirements (QA ID No. G-14478).

EPA Responsibilities: Samples shall be provided from ground-water monitoring wells and domestic wells located around Pavillion, WY. The wells will be sampled during April 2012. The vendor shall be notified at least one week in advance of the sample collection activities. Duplicate samples shall be collected in 10% of the wells, or as otherwise indicated in approved QAPPs. A total of up to 20 samples shall be submitted for MBAS. This number includes samples, duplicates, equipment blanks, and field blanks. In addition to field duplicates, it is expected that the vendor shall select one sample for a laboratory duplicate analysis in each submitted set to fulfill QA/QC requirements. This sample needs to be from our submitted sample sets and not from another site or sample queue. At one selected location an additional two sample bottles will be collected for Matrix Spike and Matrix Spike Duplicate (MS/MSD) analysis.

The samples shall be collected unfiltered into 500 mL polyethylene screw top bottles. All samples will be transported on ice to: TestAmerica, 5102 LaRoche Avenue, Savannah, GA 31404 with attention to Abbie Yant. The lab holding time for this analysis is 2 days. Samples will be shipped for overnight delivery on the same day of their collection to the TestAmerica laboratory. For samples collected on a Friday arrangements will be made with the lab for weekend service.

Contractor Responsibilities: The vendor shall determine the concentrations of methylene blue active substances using EPA Method 425.1 following their SOP SA-GE-160v5.

Acceptance Criteria: The contractor's results shall be considered acceptable if samples are analyzed samples within the 2 day holding time using EPA Method 425.1 following their SOP SA-GE-160v5, the QA/QC requirements as summarized in the attached Table 1 are met, and data deliverables as described below are provided.

Deliverables: TestAmerica shall submit a final report at completion of analysis which includes: tabulation of final results, list of SOPs used (title and SOP #), and full data packages. Full data packages (can be provided at a later date, within 30 days of issuing final results) shall be provided on CD or via email for all sample analyses to allow for reconstruction of analysis: Chain-of-custody forms, calibration data, QA/QC data, raw data, data reduction, data qualifiers, deviations from method requirements, deviations from QC acceptance criteria, and these deviations' impact to reported results. The electronic deliverables can take the form of MS Excel spreadsheets or pdf files of data reports and raw data. Results of the analysis shall be reported to Rick Wilkin via e-mail at wilkin.rick@epa.gov within five weeks of the receipt of the samples. The full data packages shall be

copied to the GWERD QA Manager, Steve Vandegrift.

Period of Performance: 45 days from sample submission.

Technical Point of Contact: Dr. Richard Wilkin (580-436-8874), Email: wilkin.rick@epa.gov.

Table 1. TestAmerica QA/QC Requirements for MBAS.

Blanks (frequency)	Calibration Checks (frequency)	Second Source (frequency)	Duplicates (frequency)	Matrix Spikes
Method Blank, 1 per batch, result <0.5 RL of 0.2 mg/L	At beginning and at end and after every 10 samples, 90-110%	After initial calibration, 90-110% of known value	RPD<10	80-120% recovery (one per 20 or every set)

The holding time for this analysis is 2 days.